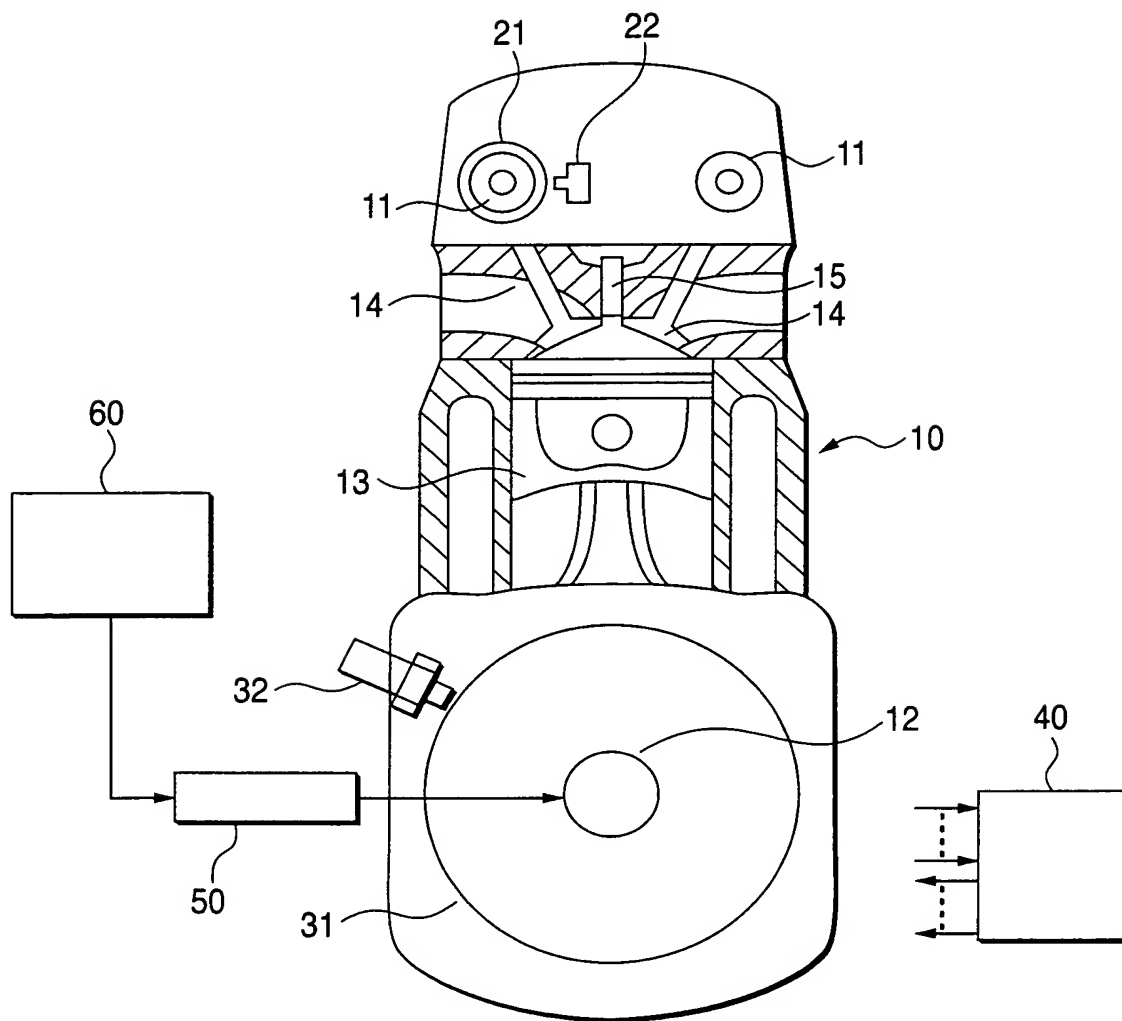


FIG. 1



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FIG. 2

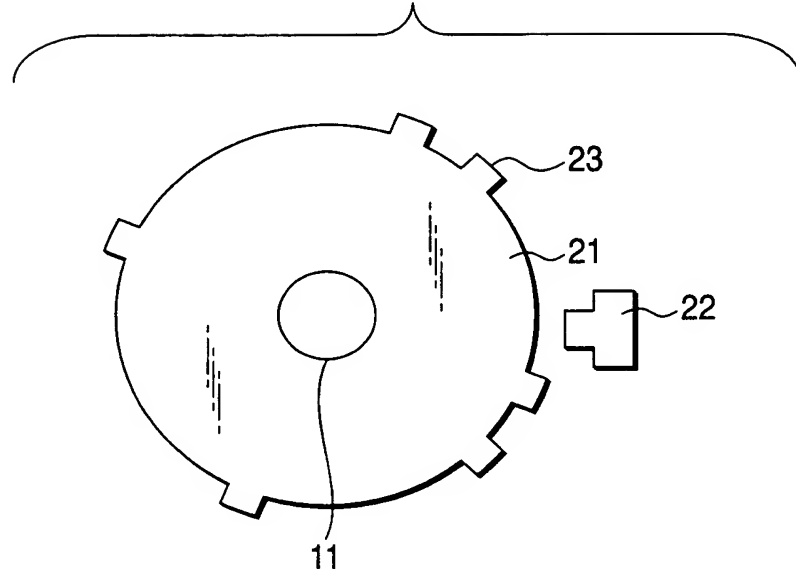
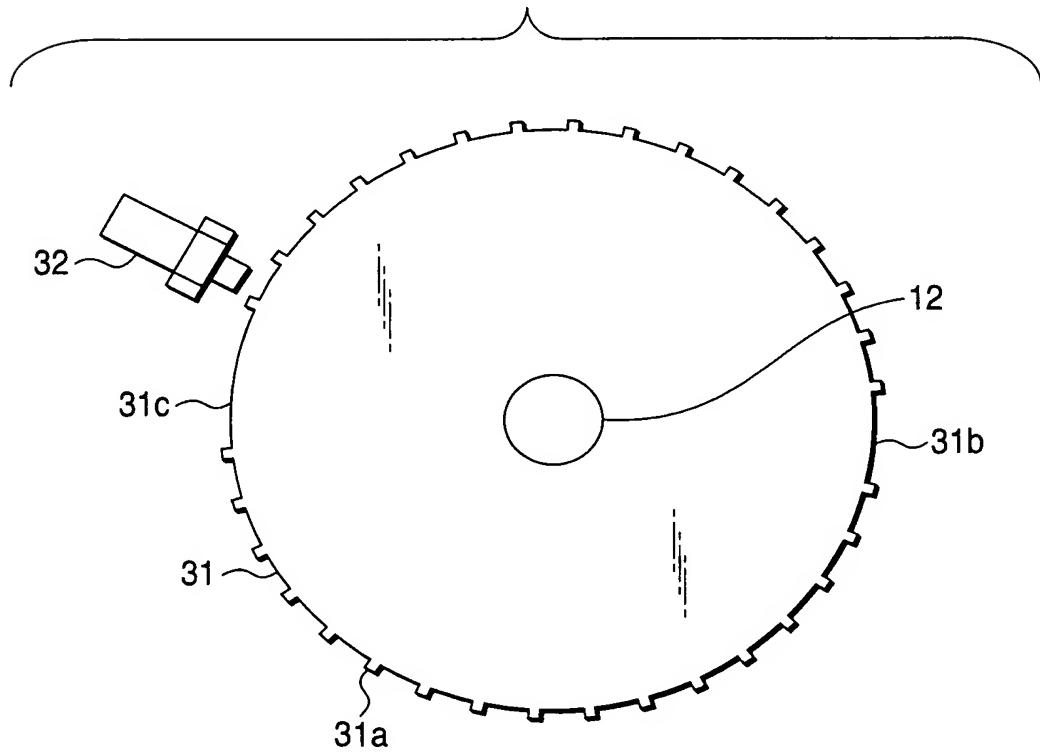
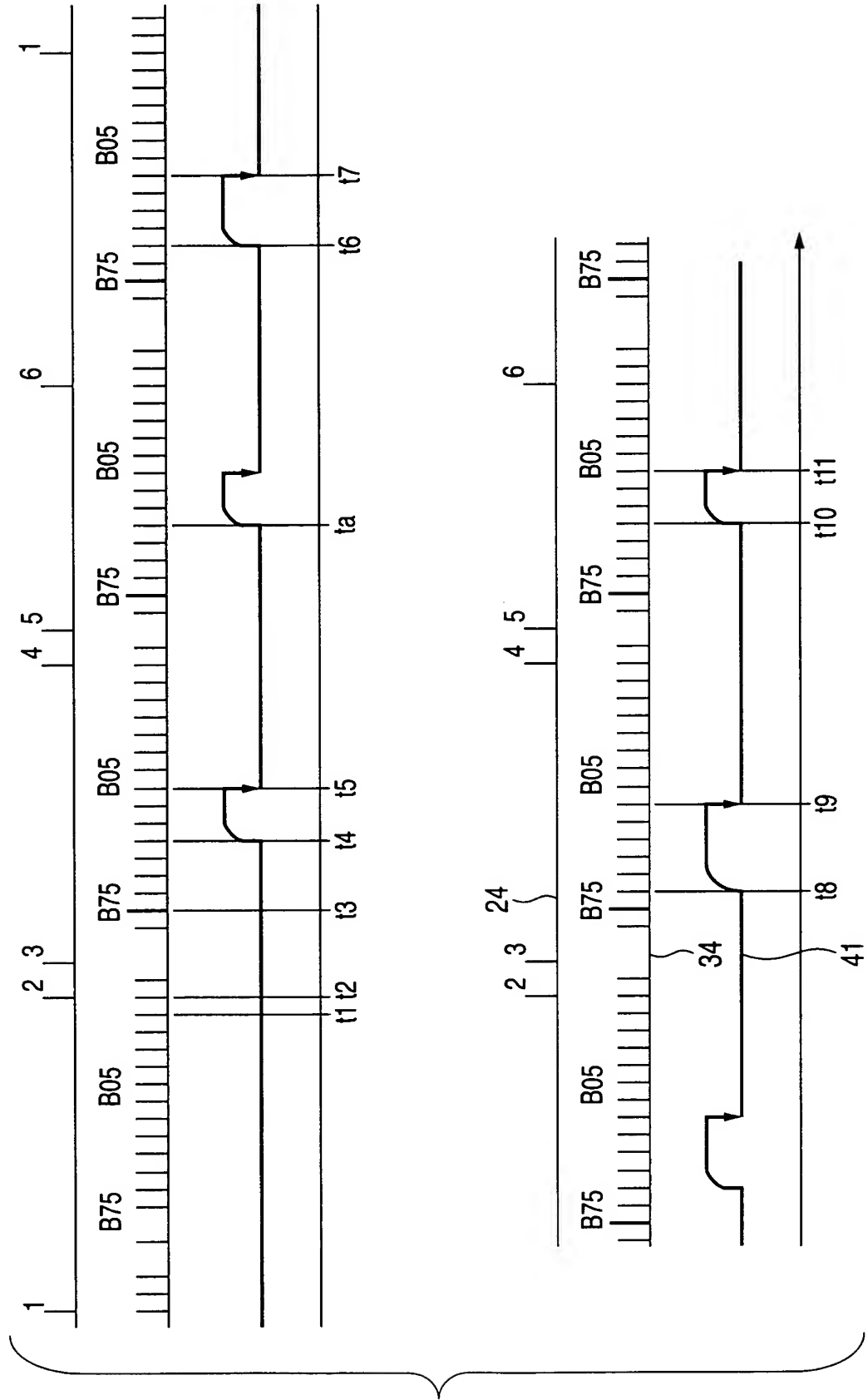


FIG. 3



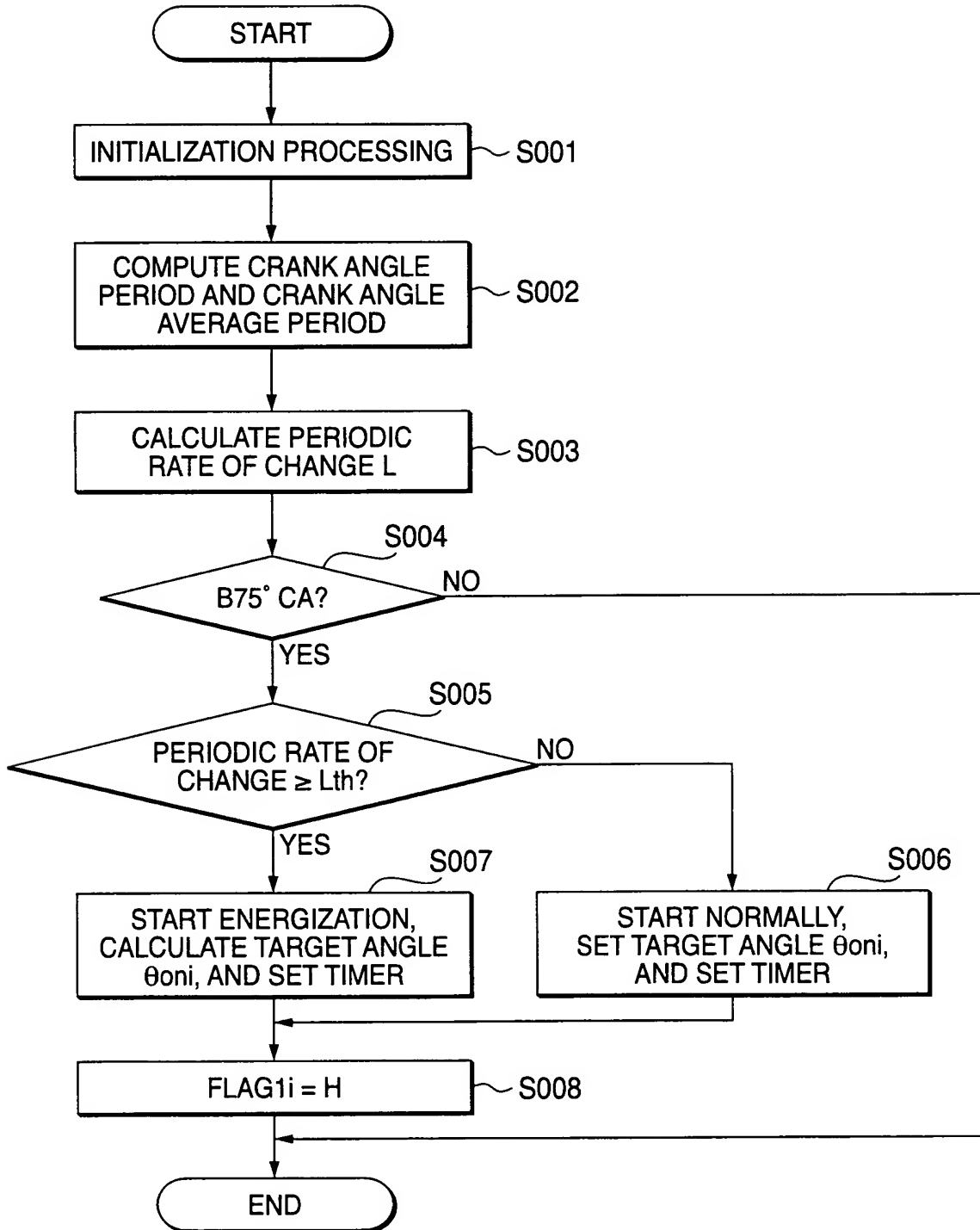
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FIG. 4



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FIG. 6

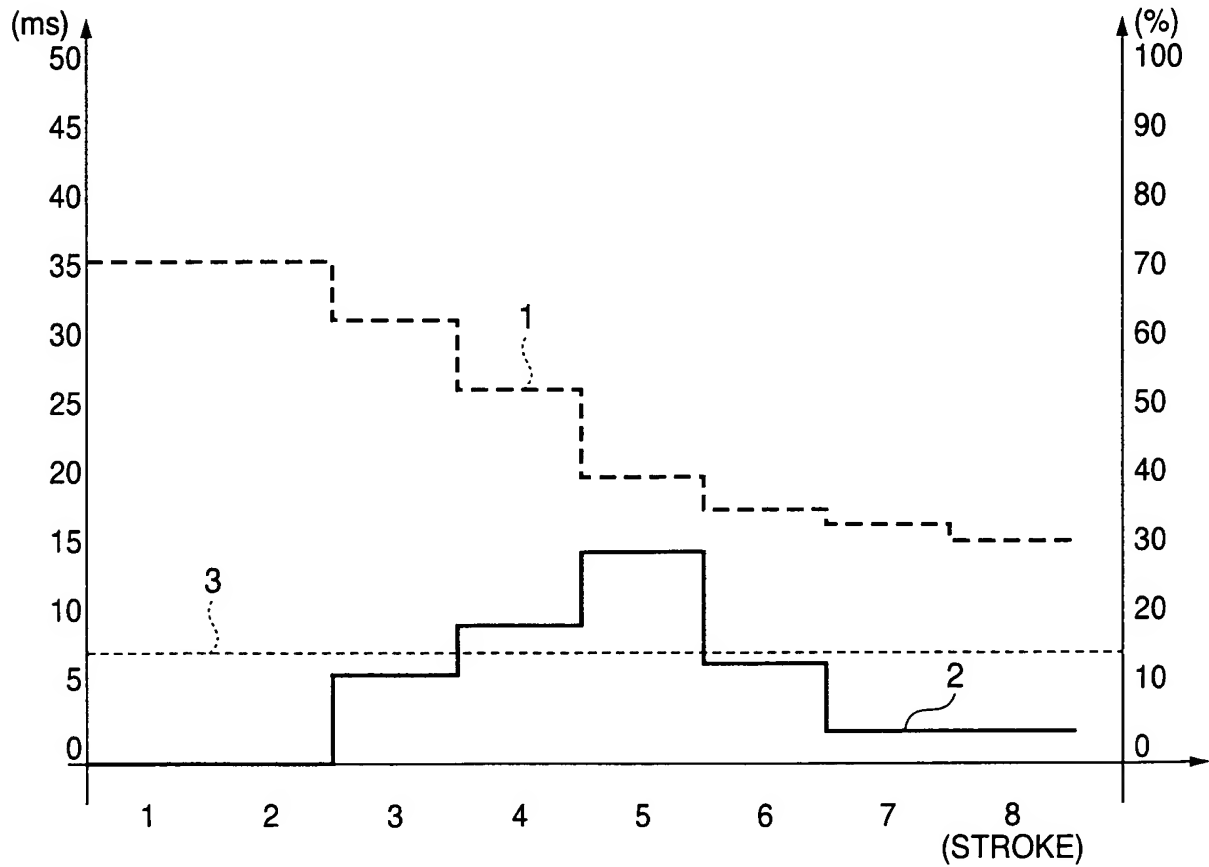


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FIG. 5A

STROKE	CRANK ANGLE PERIOD (ms)	CRANK ANGLE AVERAGE PERIOD	PERIODIC RATE OF CHANGE (%)	ENGINE SPEED (rpm)
1	2.00	36.0	0.0	833
2	2.00	36.0	0.0	833
3	1.80	32.4	11.1	926
4	1.50	27.0	20.0	1111
5	1.15	20.7	30.4	1449
6	1.00	18.0	15.0	1667
7	0.95	17.1	5.3	1754
8	0.90	16.2	5.6	1852

FIG. 5B



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FIG. 7

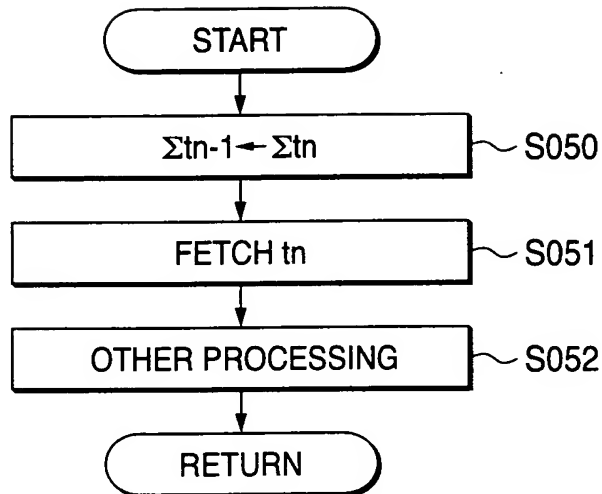


FIG. 8

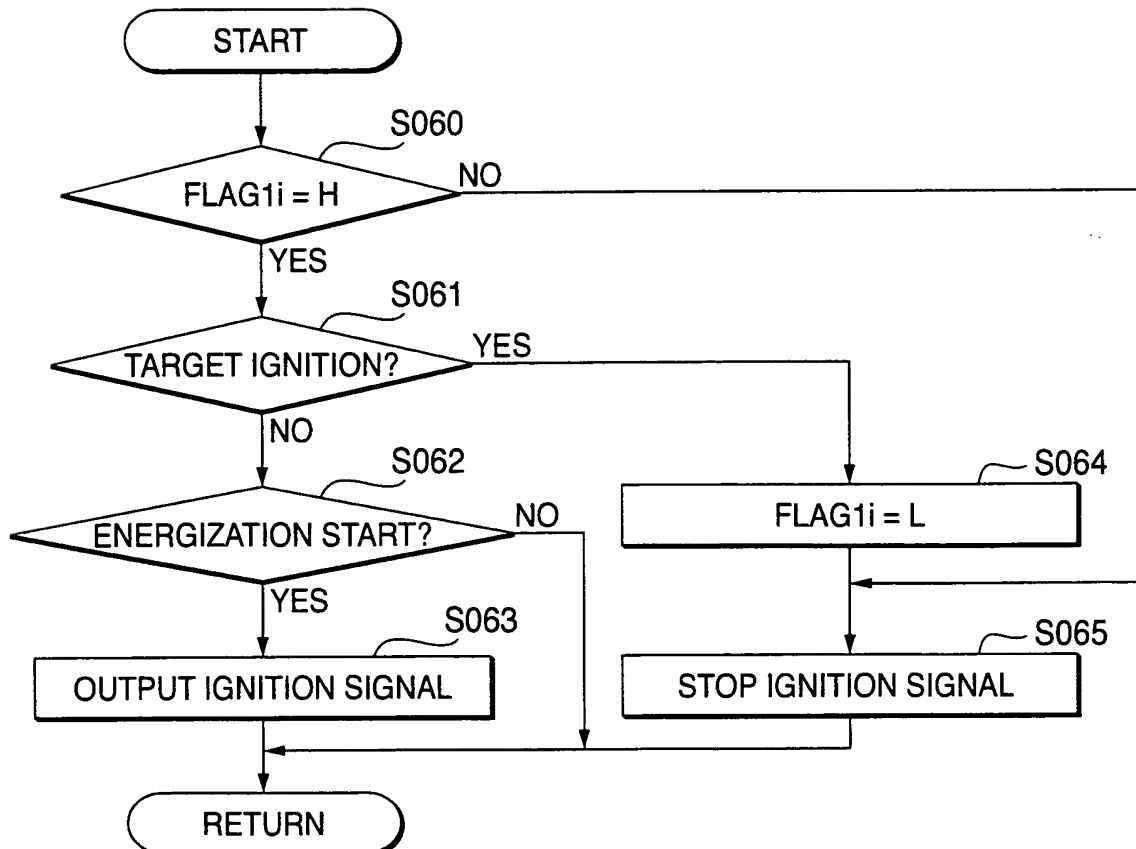


FIG. 9

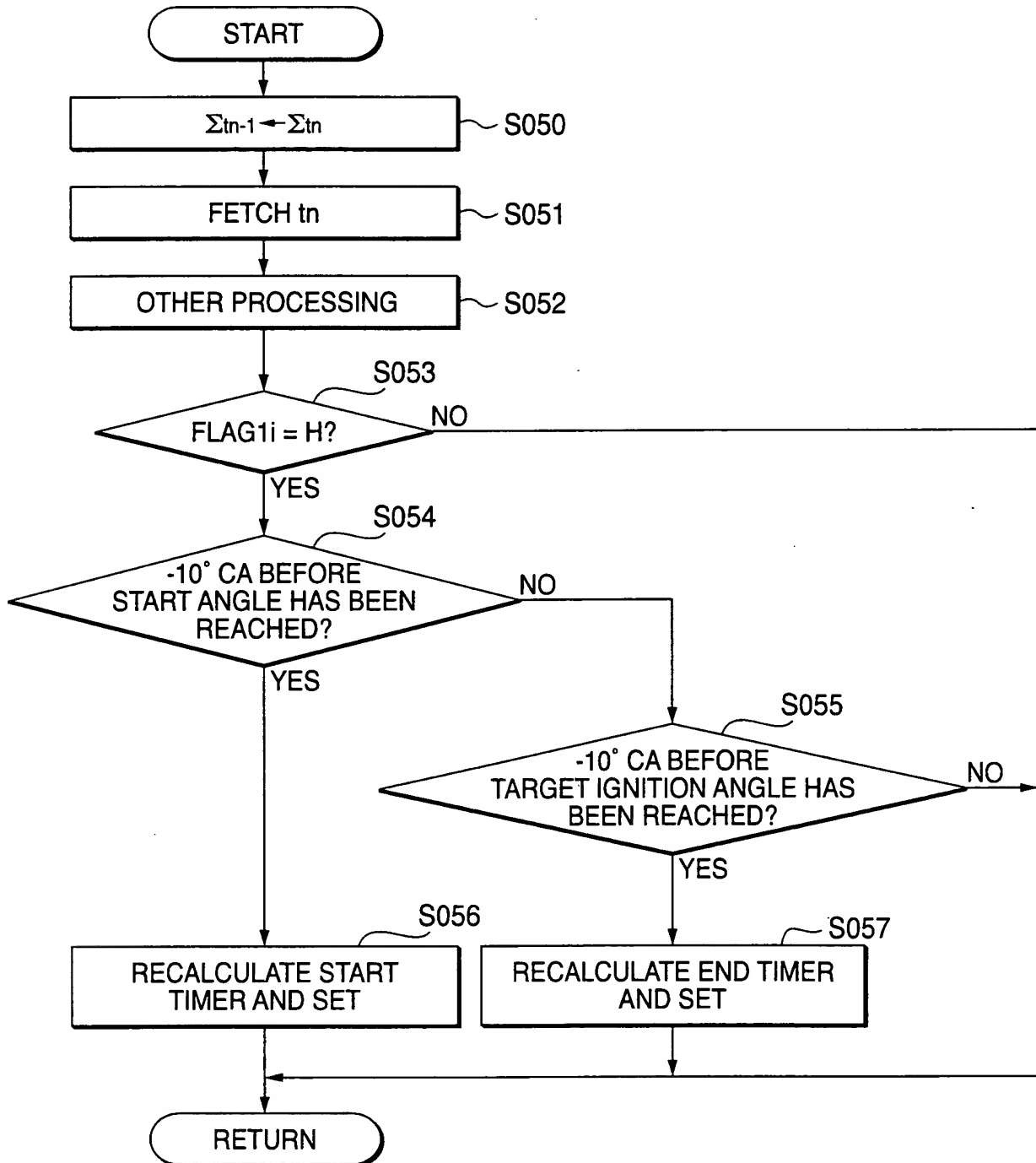


FIG. 10

